

to each other, from which I surmise that they seek mates from some other brood. When daylight comes they try to hide, putting their head into any dark corner, where they remain all day without motion.

The males and females are easy to distinguish by the characters given in Horn's description but I note a further sexual character in the granulation of the elytra; in the males the lateral margin and the tip behind the tubercles is smooth, while in the females this area is distinctly granulated. Also a slight difference in the shape of the thorax, that of the males being broader. The males also have a more shining black appearance than the females.

I have now thirty-six specimens of *Dinapate wrightii*, fourteen males and twenty-two females. I can still hear the second brood at work and hope to have more emerge next year.

**A KEY TO THE SPECIES OF THE GENUS CERESA A. & S.
OCCURRING NORTH OF MEXICO AND THE DESCRIPTION
OF A NEW SPECIES (MEMBRACIDÆ:
HOMOPTERA).**

BY EDMUND H. GIBSON AND EMMA WELLS, U. S. Bureau of Entomology.

To the novice the genus *Ceresa* represents a very puzzling group of insects of the family known as tree-hoppers, and even to the systematist it has its difficult problems. From the study of specimens in the U. S. National Museum and material generously loaned by Mr. W. D. Funkhouser the authors have been able to establish the following key to the species. In offering it as a guide in the identification of species it must be stated that it is nearly impossible to make determinations without having at hand a goodly series of specimens and a collection of all the members of the genus, to be used for comparison.

Ceresa was described by Amyot and Serville in 1843. The logotype of the genus is *vitulus* Fabr. *Ceresa* may be distinguished from *Stictocephala* Stål, its closely allied genus in North America, by having the pronotum distinctly armed with supra-humeral horns and the metopidium acutely angled. The forma-

tion of the last abdominal segment of the male differs markedly in the two genera.

KEY TO THE SPECIES OF THE GENUS CERESA A. AND S. OCCURRING NORTH OF MEXICO.

1. Pronotum banded 2.
Pronotum not banded 3.
2. Broad pale spot in middle, narrower one near apex of pronotum,
dicerus Say.
Apex of pronotum with apical band only *albescens* Van D.
3. Suprahumerals reduced to an angle 4.
Suprahumerals produced in a horn or tubercle 5.
4. Length of head greater than metopidium measured from line drawn
through suprahumeral to anterior border of face, *femorata* Fairm.
Length of head less than metopidium measured from line of supra-
humeral to anterior border of face *uniformis* Fairm.
5. Lobes of last ventral segment of female distinctly and evenly rounded,
brevicornis Fh.
Lobes of last ventral segment of female not distinctly rounded 6.
6. Base of notch in last ventral segment of female broad 7.
Base of notch in last ventral segment of female not broad, acute ... 8.
7. Suprahumerals only slightly curved backward *albido-sparsa* Stal.
Suprahumerals quite long, very acute, strongly curved backward and
slightly upward *constans* Walk.
8. Borders of face more or less rounded, clypeus blunt, not at all pro-
duced, contiguous with sides of cheeks *occidentalis* Funkh.
Borders of face more or less straight; clypeus acute and produced,
only seldom contiguous with sides of cheeks 9.
9. Inner margins of lobes of last ventral segment of female not at all
sinuate 10.
Inner margins of lobes of last ventral segment of female more or less
sinuate 11.
10. Suprahumerals strongly curved backward, long. Contour of cheeks
rounded *brevitylus* Van D.
Suprahumerals short, reduced to a short tubercle *brevis* Walk.
11. Venter black *basalis* Walk.
Venter yellow or green or brownish 12.
12. Clypeus prominently produced 13.
Clypeus somewhat produced but not prominently so 15.
13. Very narrow, long species *militaris* n. sp.
Somewhat stout species 14.
14. Inner margins of last ventral segment of female sloping. Plates of
male long *palmeri* Van D.
Inner margins of last ventral segment of female steep. Plates of male
short and stout *borealis* Fairm.

15. Metopidium flat or slightly rounded between suprahumeral when viewed from above *bubalus* Fabr.
 Metopidium feebly bisinuate when viewed from above 16.
 16. Species small, suprahumeral curving upward and backward, *taurina* Fh.
 Suprahumeral only slightly recurved *stimulea* Van D.

The following distributional groupings and list of food plants should aid in the recognition of the species.

Canada—*bubalus* Fabr., *diceros* Say, *basalis* Walk.

New England States—*albescens* Van D., *bubalus* Fabr., *brevitylus* Van D., *taurina* Fh., *constans* Walk., *palmeri* Van D., *borealis* Fairm., *brevis* Walk., *brevicornis* Fh., *basalis* Walk.

Atlantic and Gulf States—*albescens* Van D., *bubalus* Fabr., *brevitylus* Van D., *taurina* Fh., *constans* Walk., *borealis* Fairm., *brevis* Walk.

Central States—*albescens* Van D., *bubalus* Fabr., *stimulea* Van D., *constans* Walk., *militaris* n. sp., *palmeri* Van D., *borealis* Fairm., *brevis* Walk., *uniformis* Fairm.

North Central States—*diceros* Say, *albescens* Van D., *bubalus* Fabr., *stimulea* Van D., *taurina* Fh., *brevitylus* Van D., *constans* Walk., *basalis* Walk.

Southern States—*diceros* Say, *albescens* Van D., *bubalus* Fabr., *borealis* Fairm.

Western States—*bubalus* Fabr., *stimulea* Van D., *occidentalis* Funkh., *borealis* Fairm., *albido-sparsa* Stål, *basalis* Walk.

Southwestern States—*diceros* Say, *bubalus* Fabr., *brevitylus* Van D., *stimulea* Van D., *palmeri* Van D., *brevis* Walk., *brevicornis* Fh., *occidentalis* Funkh., *basalis* Walk.

The known food plants of the species are here listed. Many of the species are not restricted to a single or few food plants, in which case the principal ones only are given.

Alfalfa: *occidentalis* Funkh., *bubalus* Fabr. Apple: *bubalus* Fabr., *taurina* Fh., *borealis* Fairm. Basswood: *constans* Walk. Cherry: *bubalus* Fabr. Cotton: *borealis* Fairm. Cottonwood: *bubalus* Fabr. Elder: *borealis* Fairm. Hickory: *brevicornis* Fh. Iris: *borealis* Fairm. Maple: *bubalus* Fabr. Oak: *brevicornis* Fh., *palmeri* Van D., *taurina* Fh., *diceros* Say. Pear: *bubalus* Fabr. Potato: *bubalus* Fabr. Quince: *bubalus* Fabr.

Ceresa militaris n. sp.—Near *C. palmeri* Van D., but much narrower, a smaller species. Much longer in proportion to its width than *palmeri*. May be recognized by the long slender pronotum, narrow metopidium and very long sharp plates of male and female.

Bright green with brown and black markings, face yellow. Form long and very slender, metopidium convex, suprahumeral long and acute, posterior process slender and decurved; clypeus acute. Punctate, but only slightly if at all pubescent.

Head yellow-green, longitudinal striæ on face; clypeus triangular at apex, tip densely pilose with white hairs; ocelli translucent with orange

borders, situated slightly below a line drawn through center of eyes, somewhat closer to each other than to eyes; eyes brown, extending beyond sides of pronotum.

Pronotum green, densely punctate, very slightly pubescent, ascending nearly straight above head, convex just before suprahumeral, feebly arcuate in middle, dorsum somewhat flattened, semicircular impression very faint; median carina percurrent; humeral horns long and acute, with brown and black markings underneath, extending outward and backward; front of pronotum having long, transverse smooth irregularly-shaped areas dorsomesad of eyes, these areas yellow and shining; posterior process long, slender, sharp, much decurved, reaching to tip of abdomen in females and beyond in males, with brown markings.

Wings smoky, lightly punctate at base, veins brownish. Under surface of body yellow; last ventral segment of female very deeply and roundly notched, base of notch not as broad as *constans* Walk. Ovipositor extending beyond abdomen in a long narrow process. Plates of male broad at base and tapering to a sharp point, very long, extending beyond pygofer, tipped with black. Legs yellow, with white hairs; tarsi and claws somewhat ferruginous.

Described from five females and six males in the collection of the senior author, collected by him at Charleston, Mo., June 19, 1916. Type, allotype and three paratypes deposited in the U. S. National Museum.

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A NEW GENUS OF ANTHOMYIIDÆ (DIPTERA).

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The genus herewith described belongs to the subfamily Anthomyiinae though in some respects it resembles Phaoniinae. It differs from all other genera of the family known to me in having a single long bristle near the upper margin of the pteropleura just